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IN THE
Supreme Court of the United States

KSR INTERNATIONAL COMPANY,

Petitioner,

v.

TELEFLEX, INC., *et al.*,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF AMICI CURIAE OF FORD MOTOR COMPANY AND DAIMLERCHRYSLER CORPORATION IN SUPPORT OF NEITHER PARTY

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BRIEF AMICI CURIAE OF FORD MOTOR COMPANY AND DAIMLERCHRYSLER CORPORATION IN SUPPORT OF NEITHER PARTY

STATEMENT OF INTEREST OF AMICI CURIAE

Ford Motor Company ("Ford") and DaimlerChrysler Corporation are both auto companies with significant worldwide operations.[1] Founded in 1903, Ford grew from a small

[1] Pursuant to this Court's Rule 37.6, we note that no part of this brief was authored by counsel for any party, and no person or entity other than *amici curiae* made a monetary contribution to the preparation or submission of the brief. The brief is filed with the

enterprise into one of the world's largest corporations due in great part to innovations like the Model T and the moving assembly line. The Model T, first introduced in 1908, was small, lightweight, easy to assemble, and priced low enough to be affordable for working people. First implemented in 1913, the moving assembly line permitted Ford to vastly improve the efficiency of the manufacturing process and to make vehicles significantly less expensive.

DaimlerChrysler Corporation is the successor corporation to the Chrysler Corporation, which was founded in 1925. Like Ford, DaimlerChrysler Corporation has contributed many significant innovations to the industry, such as electric windshield wipers and full-time power steering.

Amici's innovations have resulted in the issuance of several thousand patents, many of which in turn have laid the foundation for future developments. Amici's past successes resulted from, and their future success depends on, their ability to patent their innovations and thereby to recoup the significant costs of developing new products. Because of the nature of innovation in the automobile industry, amici also have a keen interest in ensuring continued access to patent protection for nonobvious "combination" patents. Amici conversely have an interest in ensuring that patents on obvious inventions are not issued—or if they are issued in error, that they can be efficiently identified as obvious and invalidated on judicial review. The perspective provided by amici's long experience in automotive innovation is vital to a balanced evaluation of the question at issue in this case.

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consent of the parties, both of which have consented to the filing of any briefs of *amicus curiae* in this case.

SUMMARY OF ARGUMENT

I. A novel and useful invention is only patentable if it constitutes a sufficient advancement on the prior art that it is not considered "obvious." 35 U.S.C. § 103(a). In order to assess whether an invention that incorporates elements that can be found in prior art references is obvious and therefore unpatentable, the Federal Circuit asks whether there existed a "teaching, suggestion, or motivation" to combine the prior art to achieve the result for which patent protection is sought. The Federal Circuit's "teaching, suggestion, or motivation" test is consistent with the statutory criteria for obviousness set forth in Section 103 and with this Court's decision in *Graham* v. *John Deere Co.*, 383 U.S. 1 (1966), because it employs the same factors Section 103 and *Graham* endorse: (1) a comparison between the prior art and the invention; (2) an assessment of the state of the art at the time the invention was developed; and (3) consideration of the perspective of a person having ordinary skill in the art. The "teaching, suggestion, or motivation" test is a common-sense framework within which to assess and resolve the question at the core of the obviousness inquiry whenever a combination patent is challenged: would it have been obvious to a skilled practitioner to combine the prior art references? Virtually every patented invention, after all, can be challenged as obvious on the basis of prior art references. By asking if there existed a "teaching, suggestion, or motivation" to combine the references, the Federal Circuit's test ensures that the obviousness inquiry does not reduce to simply using the inventor's disclosure as a blueprint to cobble together past references and then—with the benefit of hindsight—declaring the patent obvious.

The "teaching, suggestion, or motivation" test is most effective when it adequately takes into account the perspective of a person having ordinary skill in the art, or "PHOSITA." Courts too often diminish the role of the

PHOSITA, limiting the analysis of "skill in the relevant art" merely to an inquiry into a hypothetical practitioner's level of education and years of experience in the field. The skilled practitioner's perspective—and in particular, the likelihood that a skilled practitioner would naturally piece together elements found in prior art references to achieve a new result—is a critical element of the obviousness inquiry. This Court dictated as much a hundred and fifty years ago.

An analysis of the skilled practitioner's perspective as part of the "teaching, suggestion, or motivation" test should also consider the types of problems encountered in the art, the prior art solutions to those problems, the rapidity with which innovations are made in the art, and the sophistication of the technology at issue. Paying closer attention to such factors will allow patent examiners and judges to assess with greater precision whether a given invention is obvious within the meaning of Section 103.

II. Imposing a heightened standard of nonobviousness for combination patents, as Petitioner and various commentators have suggested, would be a serious mistake. Section 103 does not distinguish categories of patents based on whether or not they are claimed as a combination of elements. There is no support in the statute for subjecting combination patents to heightened scrutiny for compliance with the obviousness requirement.

Even if the Patent Act's plain language did not preclude applying a heightened standard for assessing inventions that incorporate elements of the prior art, the automobile industry's experience shows how this approach would frustrate innovation and ultimately harm consumers. Progress in the automotive industry has often resulted from incremental improvements on preexisting ideas. Multiple resource-intensive steps are often required to transform an invention into a commercially viable feature that is not cost-prohibitive

for a mass market. Imposing a heightened obviousness standard merely because the final invention incorporates elements of the prior art will only impede future innovations.

ARGUMENT

I. THE FEDERAL CIRCUIT'S "TEACHING, SUGGESTION, OR MOTIVATION" TEST CAN BE APPLIED CONSISTENT WITH THE PATENT ACT AND THIS COURT'S PRECEDENT.

The Federal Circuit's "teaching, suggestion, or motivation" standard is an essential tool for determining whether a patent is obvious within the meaning of Section 103 of the Patent Act. The standard employs the same factors set forth in the Patent Act and identified by this Court for assessing obviousness. Applying the "teaching, suggestion, or motivation" test properly, however, requires that particular attention be paid to the perspective of a person having ordinary skill in the art, or "PHOSITA." The PHOSITA's perspective provides the lens through which obviousness determinations must be viewed.

A. The Statutory Test For Obviousness Distinguishes Trivial Inventions That Do Not Warrant Patent Protection.

The statutory requirement limiting patents to nonobvious inventions dates only to 1952, but it reflects long-standing concerns about the proper scope of patent protection. Patents seek to encourage innovation by offering limited exclusive rights to an invention in exchange for the immediate public disclosure of information about the invention. *See Bonito Boats, Inc.* v. *Thunder Craft, Inc.*, 489 U.S. 141, 150-151 (1989) ("The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the inven-

tion for a period of years."). By encouraging public disclosure, the public attains the immediate benefit of increased knowledge, which can be put toward development of new ideas and products, while inventors are granted a limited period of exclusivity within which to capitalize on an invention and recoup the costs of research and development.

But formulating the conditions of patentability has not proved easy. *Graham*, 383 U.S. at 10. Too low a threshold for patentability—*i.e.*, rewarding inventions that should be deemed routine—increases costs to the public and may hamper innovation. Too high a threshold in turn risks discouraging innovation by denying inventors the opportunity to profit from their inventions.

The first patent statutes passed over this problem and only set two conditions for patentability: utility and novelty. It was not until *Hotchkiss* v. *Greenwood*, 52 U.S. (11 How.) 248 (1851), that this Court identified that an applicant for a patent must claim an "invention"—rather than mere rote application of old techniques to new materials—to be worthy of a patent monopoly. Reviewing a patent that essentially claimed as its "invention" the use of porcelain or clay instead of wood or metal in doorknobs, the Court held the patent invalid. The Court explained that the difference between the old art—wood doorknobs—and the art claimed in the patent—porcelain doorknobs—was "destitute of ingenuity or invention. It may afford evidence of judgment and skill in the selection and adaptation of the materials in the manufacture of the instrument for the purposes intended, but nothing more." *Id.* at 266. A standard demonstration of skill in the art was insufficient in itself to merit a patent: "[U]nless more ingenuity and skill * * * were required * * * than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every

invention. In other words, the improvement is the work of the skillful mechanic, not that of the inventor." *Id* at 267.

Congress eventually codified the *Hotchkiss* "invention" requirement in the Patent Act of 1952 when it created a third statutory condition of patentability: nonobviousness. Section 103 of the Act declares that "[a] patent may not be obtained * * * if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains." 35 U.S.C. § 103(a). The statute "specifies a point in time as of which the obviousnesss of the invention should be evaluated ('at the time the invention was made') and designates the person whose judgment of obviousness should control ('to a person having ordinary skill in the art to which said subject matter pertains' or PHOSITA), as well as directing attention to 'the differences between the subject matter sought to be patented and the prior art.' " Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 Berkeley Tech. L.J. 885, 886 (2004) (quoting Section 103).

Section 103 "was intended merely as a codification of judicial precedents embracing the *Hotchkiss* condition, with congressional directions that inquiries into the obviousness of the subject matter sought to be patented are a prerequisite to patentability." *Graham*, 383 U.S. at 17. The *Graham* Court reasoned that while "the ultimate question of patent validity is one of law," Section 103 "lends itself to several basic factual inquiries," including "the scope and content of the prior art," "differences between the prior art and the claims at issue," and "the level of ordinary skill in the pertinent art." *Id.* "[S]econdary considerations" like "commercial success, long felt but unsolved needs, [and] failure of others" to perfect the invention—also findings of fact—are potentially relevant to determining obviousness as well. *Id.* at 17.

B. The "Teaching, Suggestion, Or Motivation" Test Can Be Applied Consistent With Section 103 And *Graham*.

The Federal Circuit has repeatedly held—and it held in this case—that when an obviousness challenge is based on the teachings of multiple prior art references, the challenger must establish some "suggestion, teaching, or motivation" that would have led a person of ordinary skill in the art to combine the relevant prior art teachings in the manner claimed. *See ACS Hosp. Sys., Inc.* v. *Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984); *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998) ("When a rejection [of a patent application] depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references."). The "teaching, motivation or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references." *In re Kotzab*, 217 F.3d 1365. 1370 (Fed. Cir. 2000) (citing *WMS Gaming, Inc.* v. *International Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999)). The evidence of a teaching, suggestion, or motivation to combine "may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved." *Brown & Williamson Tobacco Co.* v. *Philip Morris Inc.*, 229 F.3d 1120, 1125 (Fed. Cir. 2000).

Three concepts are wrapped into the Federal Circuit's "teaching, suggestion, or motivation" test: [1] a comparison of the prior art and the invention, [2] a review as of the time the invention was created, and [3] the perspective of a person of ordinary skill in the art. By integrating these three considerations, the test homes in on the same factors identified in Section 103 and *Graham* as being relevant to obviousness.

First, the "teaching, suggestion, or motivation" test requires comparing prior art elements to the invention and asking if the step from the former to the latter would have

been obvious to a person of ordinary skill in the art. This element of the test can be "viewed conceptually as a subset of the first *Graham* factor, the scope and content of the prior art." *McGinley* v. *Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001) (citing *Winner Int'l Royalty Corp.* v. *Wang*, 202 F.3d 1340, 1348 (Fed. Cir. 2000); *Monarch Knitting Mach. Corp.* v. *Sulzer Morat Cmbh*, 139 F.3d 877, 881-883 (Fed. Cir. 1998)); *see also* Eisenberg, *Obvious to Whom?*, 19 Berkeley Tech. L.J. at 897 ("[T]he language of § 103 explicitly points to the prior art as a benchmark for evaluating the obviousness of the invention.").

Second, with its focus on the state of the prior art at the time the invention was created, the "teaching, suggestion, or motivation" test also ensures that the determination of obviousness is made with the appropriate time frame—the time the invention was made—foremost in mind. The danger of hindsight overtaking the obviousness inquiry is particularly acute "[w]hen the art in question is relatively simple." *McGinley*, 262 F.3d at 1351; *see also* Sean M. McEldowney, *New Insights in the "Death" of Obviousness: An Empirical Study of District Court Obviousness Opinions*, 2006 Stan. Tech. L. Rev. 4 (2006) (empirical study of district court decisions on obviousness concluding that courts were less likely to invalidate complex patents than simple patents), *available at* http://stlr.stanford.edu/STLR/Articles/06_STLR_4/McEldowney-Obviousness.pdf. In such cases it is easy "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *W.L. Gore & Assocs., Inc.* v. *Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983).[2] The require-

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[2] This Court, too, has recognized the danger of hindsight bias when evaluating seemingly simple inventions:

> It is often difficult to determine whether a given improvement is a mere mechanical advance, or the result of the exercise of the creative faculty amounting to a meritorious invention.

ment of a suggestion, teaching, or motivation to combine prior art guards against the dangers of hindsight-based obviousness determinations by prohibiting examiners and judges from using a patent as a "blueprint" with which to invalidate patents. *Ecolochem, Inc.* v. *Southern Cal. Edison Co.*, 227 F.3d 1361, 1372 (Fed. Cir. 2000) (encouraging "rigorous application of the requirement for a showing of a teaching or motivation to combine the prior art references" to mitigate hindsight bias).

Third, although "the suggestion [to combine prior art references] more often comes from the teachings of the pertinent references," *Rouffet*, 149 F.3d at 1355, a "suggestion" to combine prior art references can come from the nature of the problem to be solved *or* from the level of ordinary skill in the art. *See, e.g.*, *Brown & Williamson*, 229 F.3d at 1125; *Winner Int'l Royalty*, 202 F.3d at 1348; *Rouffet*, 149 F.3d at 1357; *Pro-Mold & Tool Co.* v. *Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996). As a result, "the 'motivation-suggestion-teaching' test asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). As the court of appeals has explained,

> [T]he level of skill in the art may inform whether the artisan would find a suggestion to combine in the teachings of an exemplar of prior art. Where the level of skill is high, one may assume a keener appreciation of nuances

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> The fact that the invention seems simple after it is made does not determine the question; if this were the rule, many of the most beneficial patents would be stricken down.

Expanded Metal Co. v. *Bradford*, 214 U.S. 366, 381 (1909).

> taught by the prior art. Similarly, appreciation of the differences between the claims in suit and the scope of the prior art references—a matter itself informed by the operative level of skill in the art—informs the question of whether to combine prior art references.

McGinley, 262 F.3d at 1351.

Inquiring if there is a "teaching, suggestion, or motivation" to combine prior art references makes particular sense as a test for evaluating obviousness. *See Expanded Metal Co.*, 214 U.S. at 381 (noting that "[t]here is nothing in the prior art that *suggests* the combined operation of the * * * patent in suit") (emphasis added). "[V]irtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd.* v. *Union Oil Co.*, 713 F.2d 693, 698 (Fed. Cir. 1983). It therefore is not uncommon for "every element of a claimed invention [to] * * * be found in the prior art," *Kotzab*, 217 F.3d at 1370. *See also Reiner* v. *I. Leon Co.*, 285 F.2d 501, 503 (2d Cir. 1960) ("It is idle to say that combinations of old elements cannot be inventions; substantially every invention is for such a 'combination': that is to say, it consists of former elements in a new assemblage.") (Hand., J.); *B.G. Corp.* v. *Walter Kidde & Co.*, 79 F.2d 20, 22 (2d Cir. 1935) ("All machines are made up of the same elements; rods, pawls, pitmans, journals, toggles, gears, cams, and the like, all acting their parts as they always do and always must.") (Hand, J.). "If identification of each claimed element in the prior art were sufficient to negate patentability," the Federal Circuit has noted, "very few patents would ever issue." *Rouffet*, 149 F.3d at 1357.

Any obviousness inquiry therefore *should* entail asking whether a person of ordinary skill in the relevant art would have had a reason to combine the references in the manner claimed. *See* Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent*

Law and Policy, ch. 4, at 11 (2003) (noting hearing participants' "agree[ment] that the Federal Circuit's suggestion test asks a helpful question") ("*To Promote Innovation*"). Without making that inquiry in assessing obviousness, it would almost always be possible to mine the prior art, essentially cutting and pasting from different references, to find a basis for rejecting or invalidating a patent. The result: a heightened standard for patentability few modern inventions could meet.

C. Courts Applying The "Teaching, Suggestion, Or Motivation" Test Should Carefully Consider The Perspective Of A Person Having Ordinary Skill In The Art.

The "teaching, suggestion, or motivation" test is most effective when proper weight is placed on determining obviousness from the perspective of a person having ordinary skill in the relevant art ("PHOSITA"). In theory, the Federal Circuit has recognized the possibility that the "teaching, suggestion, or motivation" to combine prior art references can be derived from the level of ordinary skill in the art. *See Brown & Williamson*, 229 F.3d at 1125; *Kahn*, 441 F.3d at 988. But in practice, while properly recognizing that the mere incantation of PHOSITA's expertise is not enough on its own to suggest a combination, the Federal Circuit sometimes appears to minimize PHOSITA's role in the obviousness inquiry, requiring specific and detailed showings of "teaching, suggestion, or motivation" to combine when a skilled practitioner might have fashioned the same combination with far less meticulous instruction.[3] *See, e.g.*, *Rouffet*,

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[3] *See, e.g.*, *To Promote Innovation*, ch. 4, at 14 ("Some applications of the suggestion test * * * appear almost to have read the PHOSITA out of the statute."); Eisenberg, *Obvious to Whom?*, 19 Berkeley Tech. L.J. at 894 (arguing that "the Federal Circuit has downgraded PHOSITA from the role of skilled evaluator of obviousness that the statute seems to contemplate to the more limited role of skilled reader of prior art").

149 F.3d at 1357 (reversing Board of Patent Appeal's finding of obviousness on grounds that the Board failed to "explain what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination" and instead "merely invoked the high level of skill in the field of the art")[4]; *Kotzab*, 217 F.3d at 1371 (chiding the PTO for lack of a "finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed").

In this case too, the Federal Circuit stated that the District Court had applied the "teaching, suggestion, or motivation" test too laxly by failing to make " 'finding[s] as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention to make the combination in the manner claimed.' " Pet. App. 12a (quoting *Kotzab*, 217 F.3d at 1371). But a skilled practitioner often may not require the level of detailed and exacting instruction—verging on handholding—that the Federal Circuit appears to require before a "teaching, suggestion, or motivation" to combine could be found.

Instead of eliminating the "teaching, suggestion, or motivation" test altogether, it should suffice to bring greater clarity to its application by emphasizing both the PHOSITA's ability to combine prior art references and how to evaluate the level of skill in the art. *See To Promote Innovation*, ch. 4, at 15 (arguing that obviousness analysis "should ascribe to

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[4] Mere invocation of a particular level of skill for combining prior art references is not sufficient alone to constitute a "teaching, suggestion, or motivation." A convincing line of reasoning derived from this level of skill is needed—but not necessarily a detailed explanation that requires *specific* scientific "technological principle[s]" to be identified.

the person having ordinary skill in the art an ability to combine or modify prior art references that is consistent with the creativity and problem-solving skills that in fact are characteristic of those having skill in the art"). As to the first—the PHOSITA's ability to recognize and create obvious combinations—*Hotchkiss* itself, the seminal case on obviousness, teaches the importance of the skilled practitioner's perspective in the analysis. The *Hotchkiss* Court held that a practitioner exercising "skill and judgment" in the relevant art may improve on existing inventions, but those improvements that merely reflect application of a skilled practitioner's judgment in combining old references do not warrant patent protection; such improvements are to be expected when a skilled practitioner brings his or her training to bear on a problem. *See Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448 (Fed. Cir. 1985) (noting that a PHOSITA is "presumed to be one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate, whether by patient, and often expensive, systematic research or by extraordinary insights, it makes no difference which."). The Federal Circuit's "teaching, suggestion, or motivation" standard should be carefully applied with this precept in mind. An experienced practitioner in the relevant field may not need any *express* "teaching, suggestion, or motivation" to combine old elements in a new way; one skilled in the relevant art does not need a blueprint or the teacher's manual to accomplish a new innovation. *See Kotzab*, 217 F.3d at 1370 (noting that a finding of obviousness may be based on an *implicit* "teaching, motivation or suggestion" to combine prior art references). An ordinary practitioner's skill in the art may, depending on the circumstances, itself be the "suggestion or motivation" to combine.

The Court should also clarify the means by which examiners or courts arrive at what constitutes a PHOSITA, to ensure that the appropriate perspective is brought to each obviousness inquiry. What constitutes a PHOSITA may include, in

addition to commonly considered factors such as education and years of experience, factors such as: (1) the types of problems encountered in the art; (2) the prior art solutions to those problems; (3) the rapidity with which innovations are made in the art; and (4) the sophistication of the technology. *See Ruiz* v. *A.B. Chance Co.*, 234 F.3d 654, 666-667 (Fed. Cir. 2000) (explaining these factors as relevant to assessing the level of ordinary skill in the art).

D. Eliminating The "Teaching, Suggestion, Or Motivation" Test Will Not Solve The Problems Attributed To It.

Many of the problems commonly attributed to the Federal Circuit's "teaching, suggestion, or motivation" test also bear only slight relation to it, such that discarding the test is unlikely to solve those problems. The Solicitor General and some amici have suggested, for example, that the test, which requires specific findings supporting the conclusion of "teaching, suggestion, or motivation," makes it difficult to obtain summary judgment on obviousness. *See* Br. for United States on Pet. for Cert. at 17; Br. of Cisco Systems on Pet. for Cert. at 14-16. But the obviousness test is made up of *many* factual inquiries; *Graham* itself observes as much. *See Graham*, 383 U.S. at 17; *see also Connell* v. *Sears, Roebuck & Co.*, 722 F.2d 1542, 1547 (Fed. Cir. 1983) ("The obviousness issue may be in some cases complex and complicated, on both fact and law."). And to the extent the Federal Circuit's requirement of "clear and convincing" evidence of a "teaching, suggestion, or motivation" inhibits summary judgment, that evidentiary standard is a function of the statutory presumption of validity applied to patents; it is unrelated to the test. *See American Hoist & Derrick Co.* v. *Sowa & Sons, Inc.*, 725 F.2d 1350, 1360 (Fed. Cir. 1984) ("[Section] 282 creates a presumption that a patent is valid and imposes the burden of proving invalidity on the attacker.

That burden is constant and never changes and is to convince the court of invalidity by clear evidence.").

Complaints about the proliferation of so-called "business method" patents, licensing pools, and non-practicing entities likewise bear only passing relation to the obviousness requirement. *See, e.g.*, *To Promote Innovation*, ch. 4, at 10-14; National Research Council, *A Patent System for the 21st Century* 5-6 (2004). These purported problems with the patent system are as likely to stem from institutional factors involving the PTO, the nature of particular industries, and the interpretation of other provisions in the Patent Act, as they are to the issuance of patents on inventions that may fall below the threshold of nonobviousness set by Section 103. *See, e.g.*, Carl Shapiro, *Patent System Reform: Economic Analysis and Critique*, 19 Berkeley Tech. L.J. 1017 (2004) (questioning need for reforms suggested to the patent system in FTC and National Research Council reports). To the extent they are relevant to the obviousness inquiry, moreover, the solution amici propose here—giving greater weight to the role of the PHOSITA in the obviousness inquiry—will ameliorate many such issues.

II. IMPOSING A HEIGHTENED STANDARD FOR DETERMINING OBVIOUSNESS OF CERTAIN CATEGORIES OF PATENTS IS INCONSISTENT WITH SECTION 103 AND THIS COURT'S PRECEDENT AND WOULD HARM INNOVATION.

It would be a mistake to discard the "teaching, suggestion, or motivation" test for all of the reasons just explained. And it would be an even greater mistake to replace the test with a more stringent standard of nonobviousness for patents claimed as a combination of elements. *See, e.g.*, Pet. at 14-16 (suggesting that a heightened standard of validity should apply to combination patents); *cf.* John H. Barton, *Non-Obviousness*, 43 IDEA: The Journal of Law & Tech. 475, 503 (2003) (advocating elevating nonobviousness standard

for combination patents); Mark A. Lemley & David W. O'Brien, *Encouraging Software Reuse*, 49 Stan. L. Rev. 255, 302 (1997) (endorsing heightened nonobviousness test for software combination patents).

A. Section 103 And This Court's Precedent Do Not Support A Heightened Standard Of Patentability For Combination Patents.

Section 103 treats all patents the same: an invention is unpatentable "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a). Section 103(a)'s closing sentence confirms that the statutory obviousness standard does not distinguish among patents based on whether they incorporate elements from the prior art: "Patentability shall not be negatived by the manner in which the invention was made." *Id.*; *see also Connell*, 722 F.2d at 1549 ("There is no classification entitled 'combination patents,' " in Section 103, or elsewhere "in the [Patent Act].").[5]

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[5] The legislative history surrounding passage of the 1952 Patent Act confirms Congress's intent to establish one standard for determining whether inventions are obvious and unpatentable. *See* S. Rep. No. 1979, at 6 (1952) (statutory nonobviousness standard intended to ensure "uniformity and definiteness"); H.R. Rep. No. 1923, at 7 (1952) (same); *see also Graham*, 383 U.S. at 16-17 (noting the same).

The Court has also identified the importance of uniformity in other aspects of the patent system. *Sears, Roebuck & Co.* v. *Stiffel Co.*, 376 U.S. 225, 230-231 (1964) ("[T]he patent system is one in which uniform federal standards are carefully used to promote invention while at the same time preserving free competition."); *see also Florida Prepaid Postsecondary Educ. Expense Bd.* v. *College Sav. Bank*, 527 U.S. 627, 650 (1999) (noting that "consis-

This Court has also stressed the need for uniformity in evaluating obviousness. The *Graham* Court recognized that "[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context," but expressed confidence that "strict observance of the requirements laid down here will result in that uniformity and definiteness which Congress called for in the 1952 Act." *Graham*, 383 U.S. at 18. Rigorous adherence to the *Graham* criteria—which do not distinguish among classes or tiers of favored or less-favored patents—fosters the uniformity Congress sought to achieve in Section 103.

Nor is application of a heightened obviousness standard to combination patents supported by *Anderson's-Black Rock* v. *Pavement Co.*, 396 U.S. 57 (1969), or *Sakraida* v. *AG Pro, Inc.*, 425 U.S. 273 (1976), as some have suggested. *See* Pet. at 14-16. The Court in both cases invalidated patent claims combining various elements known in the prior art, noting that the combination patents did not achieve a "synergistic result." *Anderson's-Black Rock*, 396 U.S. at 61; *Sakraida*, 425 U.S. at 282 (noting that patent could not "be characterized as synergistic"). These references to the "synergi[es]" that occasionally result from combining prior art in a new and unexpected way, however, did not add an additional layer of inquiry to the question whether a patent combining multiple prior art references clears the obviousness hurdle To the contrary: the Court in both cases repeatedly relied on *Graham* in conducting its obviousness analysis. *See Sakraida*, 425 U.S. at 279; *Anderson's-Black Rock*, 396 U.S. at 61. The better reading of the Court's comments about "synergistic" effects is that they were "merely to note the advent of a phenomenon which may emanate from a combination claim, without any indication by the Court that the phenomenon must be present in every case to satisfy the

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tency [and] uniformity * * * are matters of overriding significance" in patent law) (Stevens, J., dissenting).

requirements of Section 103." *Rengo Co.* v. *Molins Mach. Co.*, 657 F.2d 535, 543 (3d Cir. 1981) (quotation omitted). *See also Stratoflex, Inc.* v. *Aeroquip Corp.*, 713 F.2d 1530, 1540 (Fed. Cir. 1983) (noting that a "requirement for 'synergism' or a 'synergistic effect' is nowhere found in the [patent] statute" and that a "reference to a 'combination patent' is equally without support in the statute"); *Custom Accessories, Inc.* v. *Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 959 (Fed. Cir. 1986) (same).

B. A Heightened Standard For Determining Whether A Combination Patent Is Nonobvious Creates A Substantial Risk Of Impeding Innovation.

The experience of the automobile industry over the past century confirms that adopting a heightened standard of nonobviousness for patents claimed as a combination of elements would not only conflict with the plain language of Section 103; it would harm innovation. Indeed, the patents most vulnerable to an obviousness attack in a regime that encourages more rigorous review of combination patents may be the ones that provide the most tangible benefits to society.

Innovations in the automotive industry often spring from incremental improvements on preexisting ideas. The path from an idea to automotive innovation generally requires a succession of inventions that build upon earlier inventions—particularly when the inventor tries to make an innovation available and affordable for average consumers. It would impede technological progress in the industry to subject a manufacturer's hard-won improvements to a more rigorous obviousness inquiry merely because they incorporate elements from prior art.[6]

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[6] Unlike computer-based industries, moreover, the mechanical-structural inventions of the automobile industry do not as readily lend themselves to copyright or trade secret protection. Thus a

A few examples illustrate this point. One of the most successful automotive inventions in the twentieth century was the electric starter. First patented in 1900, *see* U.S. Patent No. 657,662 (filed March 14, 1900), the electric starter was not incorporated into an automobile until 1912, when Cadillac incorporated into its vehicle design a starter based on a prototype developed from a competing patent.[7] Even then, it still took years of revisions, resulting in multiple additional patents, before electric starters became ubiquitous on automobiles.[8] By the time electric starters became a standard feature—complete with patent protection[9]—it would have been easy to characterize the ultimate innovation as little more than a combination of known parts. Yet denying patent protection for this reason alone would likely have discouraged the huge front-end investment that was required to pursue future innovations in the area.

Safety glass is another revolutionary innovation in the automobile industry that occurred only as a result of successive improvements and numerous patents over many years. The French chemist Edouard Benedictus first invented laminated glass in 1903 after noticing that a glass flask

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patent may be the only available means for manufacturers like Ford to protect its inventions.

[7] *See* General Motors, History, *http://gm.com/company/corp_info/history/gmhis1910.html.*

[8] *See* U.S. Patent Nos. 657,662 (filed Sept. 11, 1900); 675,848 (filed June 4, 1901); 745,157 (filed Nov. 24, 1903); 842,827 (filed Jan. 29, 1907); 997,003 (filed July 4, 1911); 1,064,765 (filed June 7, 1913); 1,117,378 (filed Nov. 17, 1914); 1,171,055 (filed Feb. 8, 1916); 1,229,754 (filed June 12, 1917); 1,240,348 (filed Sept. 18, 1917); 1,241,990 (filed Oct. 2, 1917); 1,243,422 (filed Oct. 16, 1917); 1,372,650 (filed Mar. 22, 1921).

[9] *See* U.S. Patent No. 1,372,650 (filed Mar. 22, 1921).

coated with cellulose nitrate did not shatter when dropped.[10] Benedictus soon began developing safety glass for use in automobile windshields.[11] But it was not until 1928 that laminated safety glass became widespread when Ford made it standard on the Model A.[12] The idea of using laminated safety glass in automobile windshields would have seemed obvious by the time safety glass was incorporated into the Model A's design as a patented invention.[13] But that development came about only because Ford refined, developed, and patented methods of producing laminated glass in continuous rolls that lowered manufacturing costs and made the idea commercially feasible. Ford's ability to capitalize on successive refinements to safety glass—and to secure patent protection for those progressive steps—gave the company the necessary incentive to continue improving its innovation.

The facts of this case provide still another example. The first adjustable gas pedal assembly was patented as early as 1915, but even today adjustable pedal assemblies are not ubiquitous on automobiles.[14] Although an adjustable pedal assembly may appear to involve relatively straightforward technology, developing and manufacturing a reliable and cost-effective device that controls the speed of an automobile is a complex undertaking.

Automotive innovations begun one hundred years ago continue still. Current refinements to starters, safety glass,

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[10] *See* IHS, Automotive Glazing: Origins of the Art, *http://auto.ihs.com/newsletters/auto-july05-2.jsp.*

[11] *See id.*

[12] *See* The Henry Ford, History of the Rouge, *http://thehenryford.org/rouge/history2.asp.*

[13] *See* U.S. Patent No. 1,616,405 (filed Feb. 1, 1927).

[14] *See* U.S. Patent No. 1,128,975 (filed March 10, 1914).

and adjustable pedal assemblies show that innovation in the automobile industry, as in other industries involving large-scale commercial manufacturing, often results from incremental improvements that appear in retrospect to be almost inevitable. *See McGinley*, 262 F.3d at 1351 ("The genius of invention is often a combination of known elements which in hindsight seems preordained."). Those incremental refinements—the refinements that transform inchoate inventions into complete and useful ones—are as important as the first iteration of an invention. It is the prospect of patent protection on successive improvements to an initial design that often makes investing in further improvements worthwhile. Far from signaling a fundamental breakdown in the patent system, these incremental innovations illustrate the continued importance of patent protection to development and competition in the automobile industry.

CONCLUSION

For the foregoing reasons, amici respectfully submit that the case be remanded to the Federal Circuit for that court to further consider the perspective of a person having ordinary skill in the art in applying its "teaching, suggestion, or motivation" test.

Respectfully submitted,

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